ORDER NO. AD9605115A2

Service Manual

Tuner/Sound Processor

Tuner

DOLBY SURROUND PRO • LOGIC

ST-CH570

Please file and use this manual together with the service manual for Model No. ST-CH570, Order No. AD9603050C8.

Note: This service manual is provided to indicate the differences between the original No. ST-CH570 (E) and the subsequent model No. ST-CH570 (EP).

- However, the sections on "Schematic Diagram", "Printed Circuit Board Diagram" and "Replacement Parts List" are printed in this manual.
  Refer to the ST-CH570 (E) service manual for other information.

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

Colour

(K) : Black

Areas

Suffix for Model No.	Area	Colour
(EP)	Europe	(K)

System: SC-CH570

Specifications

■ Pre-amplifier section

Input sensitivity/impedance	
PHONO	2.5 mV/47 kΩ
EXTERNAL	250 mV/15 kΩ
Output level	
EXTERNAL REC OUT	150 mV/1.5 kΩ
Frequency response	
PHONO	30 Hz – 15 Hz/+1.5 to -2.0 dB
EXTERNAL	20 Hz – 40 kHz
S/N	
PHONO	DIN 73 dB (77 dB, IHF)
EXTERNAL	DIN 80 dB,(82 dB, IHF)

■ EQ/SFP section

Center frequency	120 kHz, 1 kHz, 7 kHz
EQ SPACE mode	
3 modes	HALL, CLEAR, HEAVY
V. BASS mode	
Center frequency	70 Hz
V. BASS 1	+3 dB
V. BASS 2	+6 dB

■ DOLBY PRO LOGIC section

PRO LOGIC mode	SURROUND, 3 STEREO
CENTER mode	NORMAL, WIDE, PHANTOM
DELAY TIME	20 ms (Fixed)

■ FM tuner section

Frequency range	65.00 – 74.00 MHz (0.01 MHz steps) 87.50 – 108.00 MHz (0.05 MHz steps)
Sensitivity	1.8 μV (IHF usable)
S/N 26 dB	1.5 μV
S/N MONO	70 dB (75 dB, IHF)
Stereo separation 1kHz	35 dB
Antenna terminal(s)	75 Ω (unbalanced)

■ AM tuner section

Frequency range	
MW	522 – 1611 kHz (9 kHz steps) 530 – 1620 kHz (10 kHz steps)
LW	144 – 288 kHz (9 kHz steps)
Sensitivity (S/N 20 dB)	
MW	500 μV/m
LW	50 μV

■ Timer section

Clock	Quartz-lock type
Function	24-hour programmable; Play timer (1 time), REC timer (1 time), Sleep (120 min, 30 min intervals)
Setting	1 minute-23 hours 59 minutes (1 min intervals)

■ General

Dimensions (W x H x D)	270 x 89 x 282 mm
Weight	1.7 kg

Note: Specifications are subject to change without notice.
Weight and dimensions are approximate.

System	Tuner/sound processor	Compact disc player	Amplifier	Cassette deck	Front speakers	Center speaker	Surround speakers
SC-CH570	ST-CH570	SL-CH570	SE-CH570	RS-CH770	*SB-CH570	*SB-PT570	
						*SB-PC570	*SB-PS570

*: Made in PAES

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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■Schematic Diagram

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C MAIN CIRCUIT ..... 3 ~ 7
A TUNER CIRCUIT 8, 9
B OPERATION CIRCUIT 10, 11
D DOLBY PROLOGIC CIRCUIT ..... 12 ~ 14

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

- **S901**: FM switch (FM)
- **S902**: LW/MW select switch (LW/MW)
- **S903**: Tuning mode select switch (TUNING MODE)
- **S904**: Timer/clock switch (TIMER/CLOCK)
- **S905**: Set switch (SET)
- **S906**: Tuning/timer select switch (TUNING/TIMER ∨)
- **S907**: Tuning/timer select switch (TUNING/ TIMER∧)
- **S915**: Karaoke mode select switch (KARAOKE)
- **S916**: Play timer switch (◴ PLAY)
- **S917**: Record timer switch (◴ REC)
- **S918**: Source input select switch (SELECTOR)
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

- Voltage values and waveforms are measured as indicated in the schematic diagram when test points between **TP602** and **TP610**, and between **TP610** and **A.GND** are shorted.

No mark : FM mode ( ) : AM (MW) mode < > : AM (LW) mode

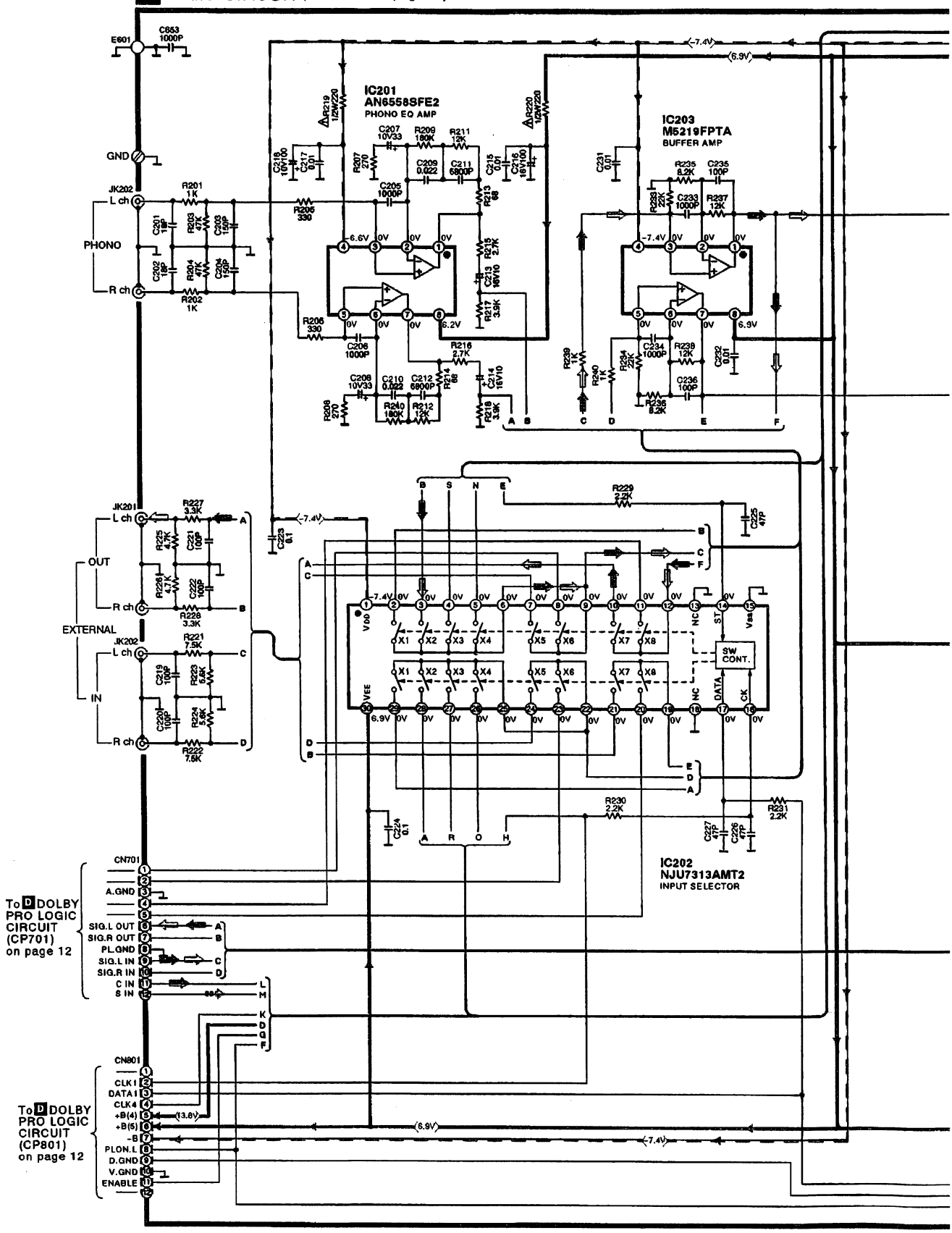
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

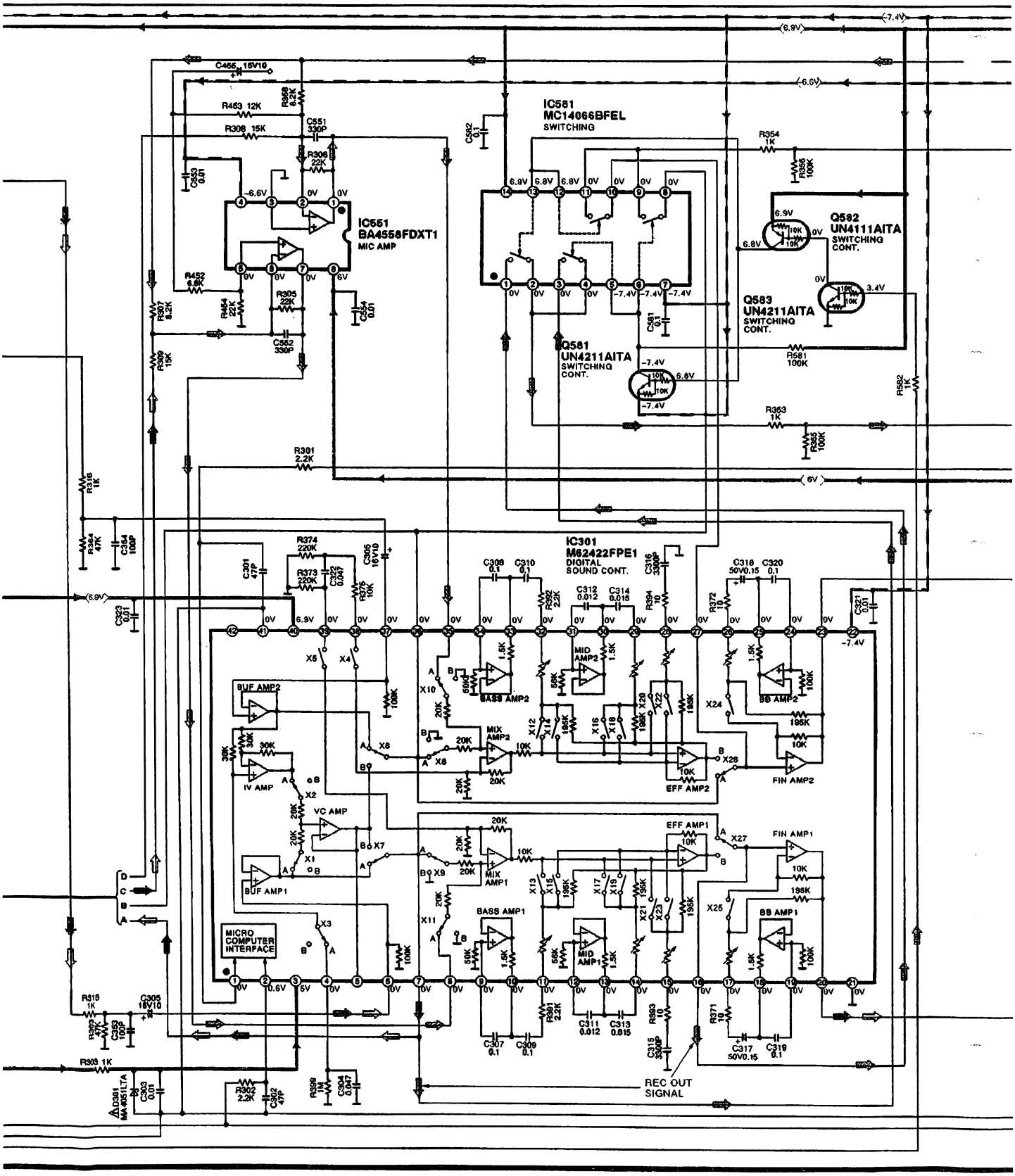
- **Voltage and signal line**

: Positive voltage line
: Negative voltage line
: FM signal line
: FM OSC signal line
: AM (LW/MW) signal line
: AM (LW/MW) OSC signal line
: REC OUT signal line
: MIC signal line
: Center speaker drive signal line
: Surround speaker drive signal line

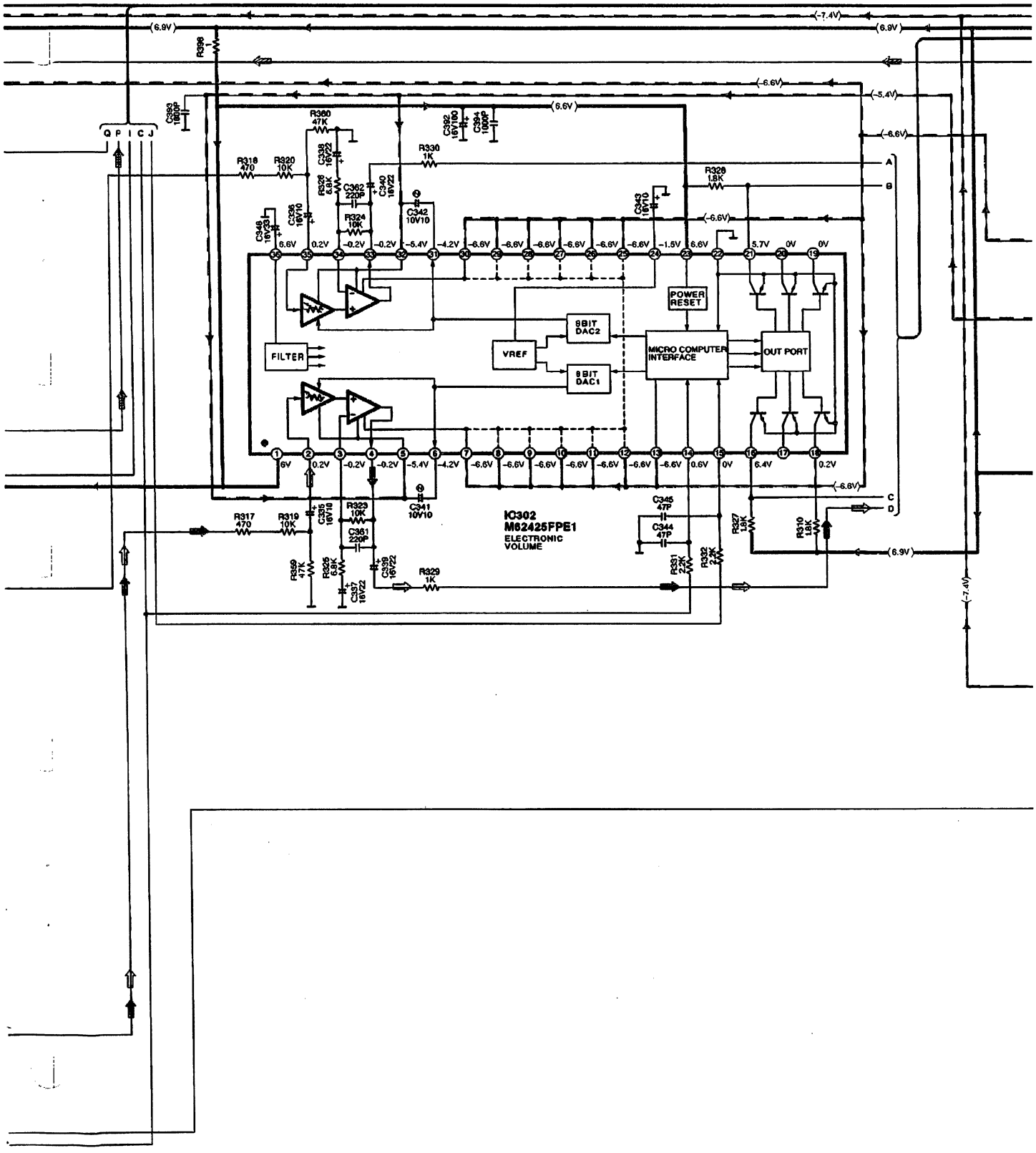
C MAIN CIRCUIT (P.C.Board:on page 15)



C MAIN CIRCUIT (P.C.Board:on page 15)

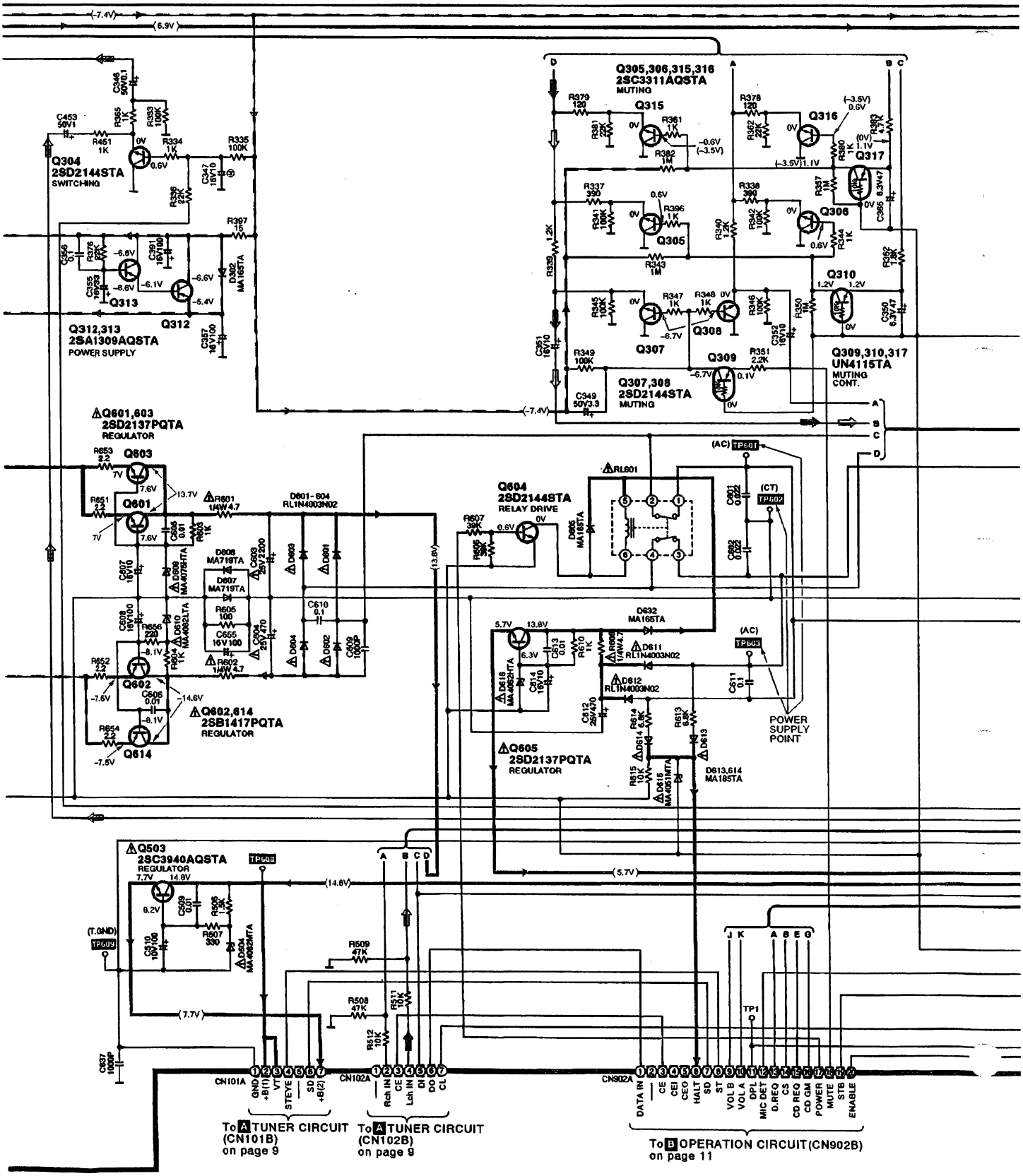


: Positive voltage line : Negative voltage line : FM signal line
: AM (LW/MW) signal line : REC OUT signal line : MIC signal line

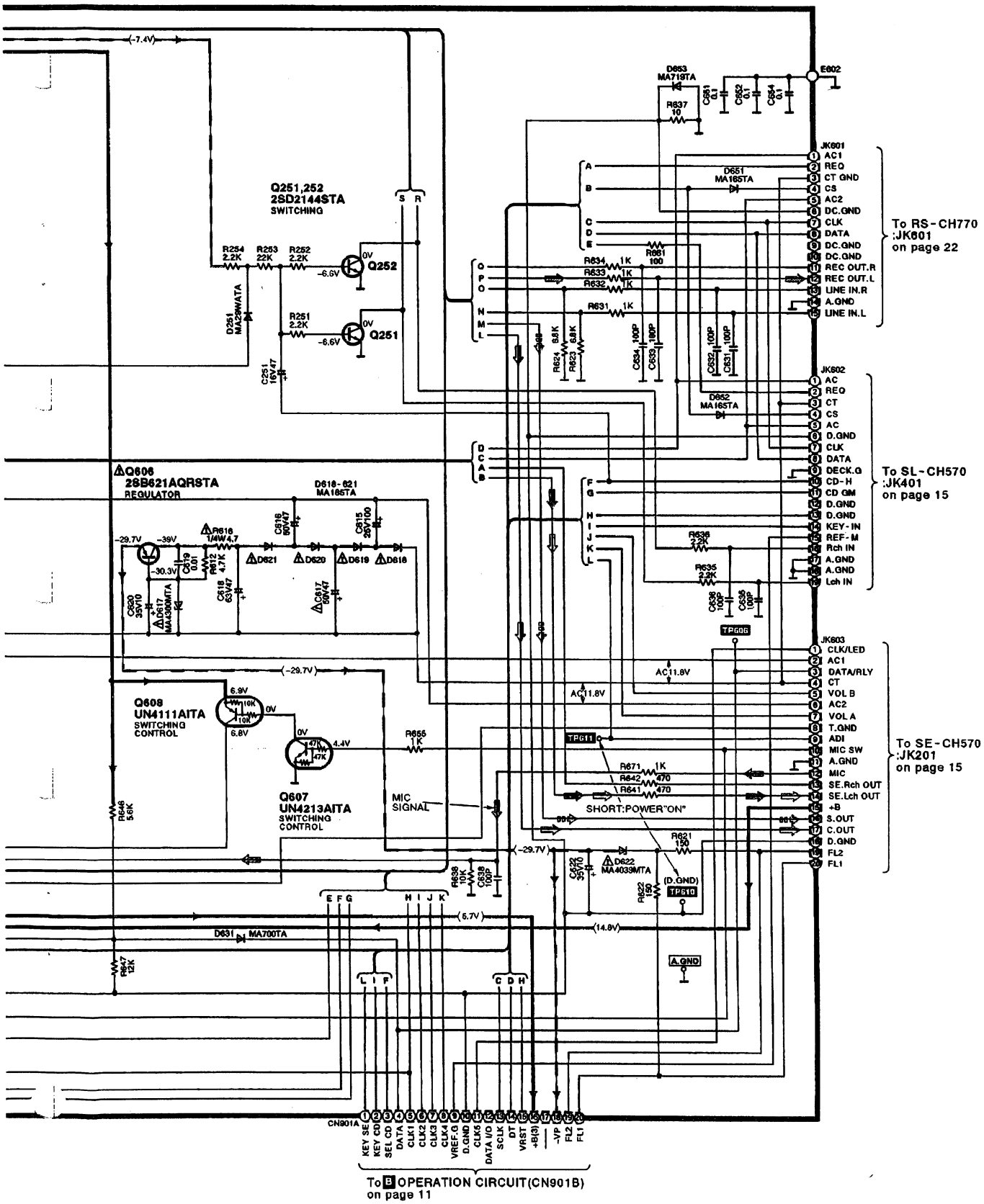


: Positive voltage line : Negative voltage line

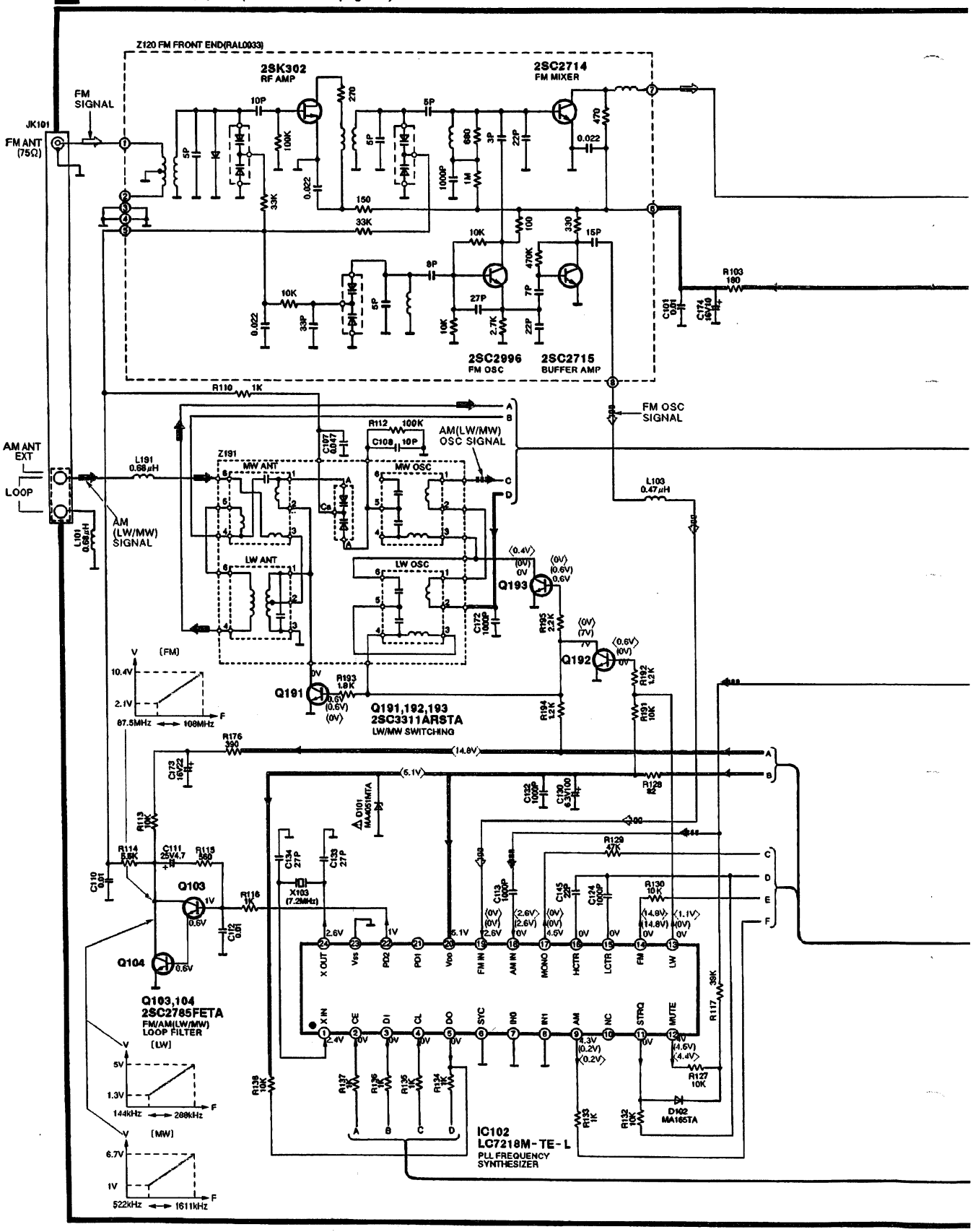
C MAIN CIRCUIT (P.C.Board:on page 15)



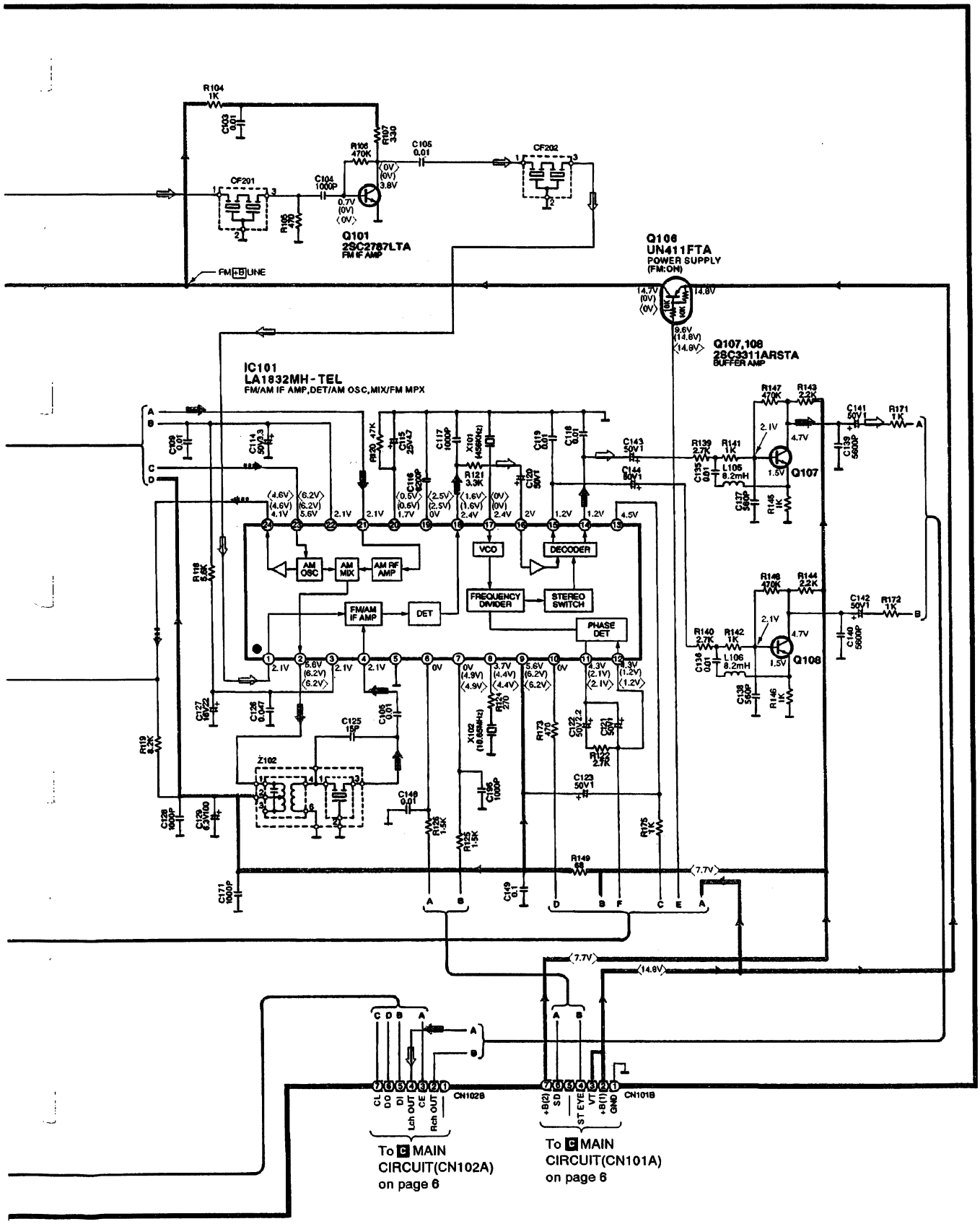
: FM signal line : AM (LW/MW) signal line : REC OUT signal line : MIC signal line
: Center speaker drive signal line : Surround speaker drive signal line



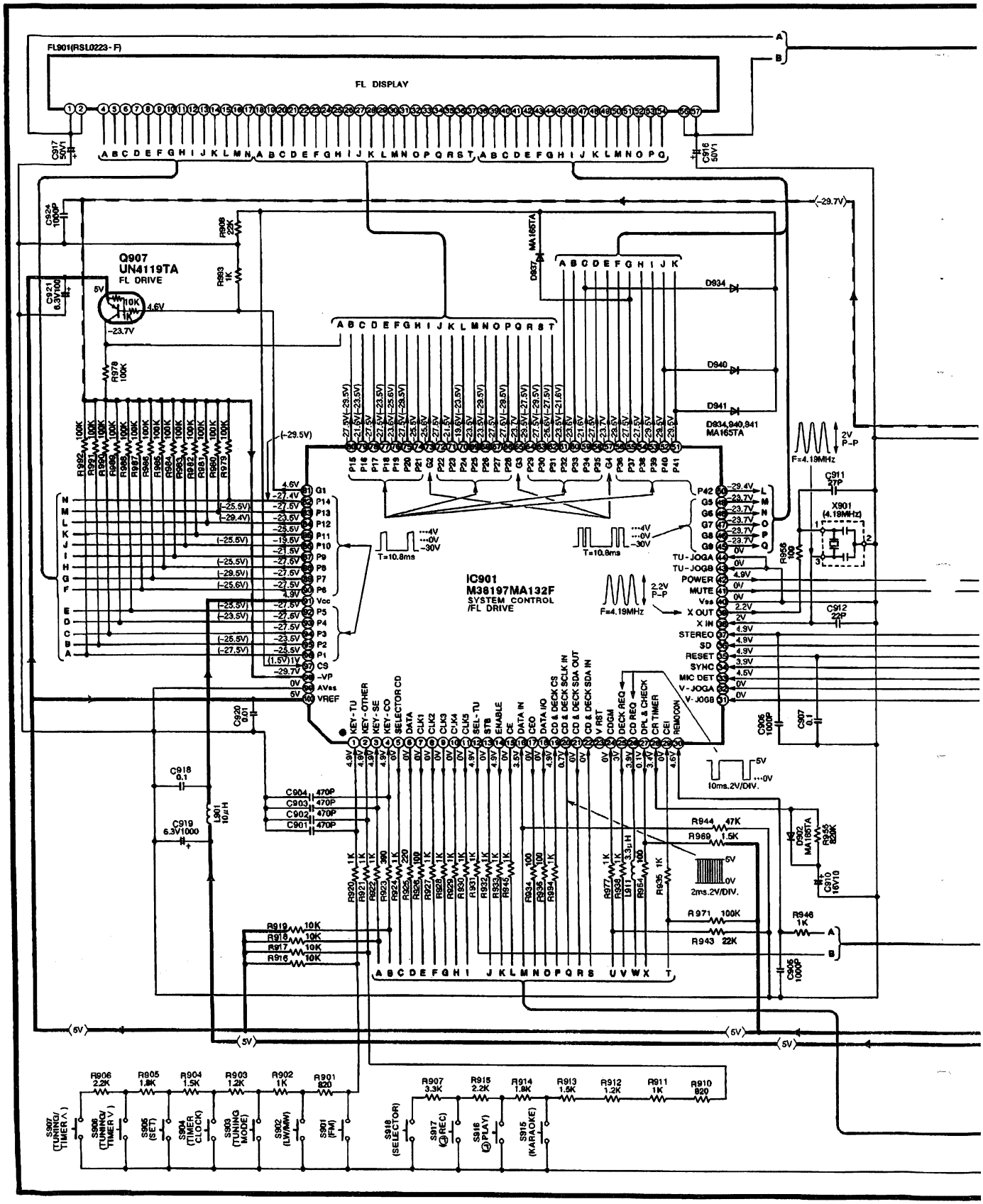
A TUNER CIRCUIT (P.C. Board: on page 16)



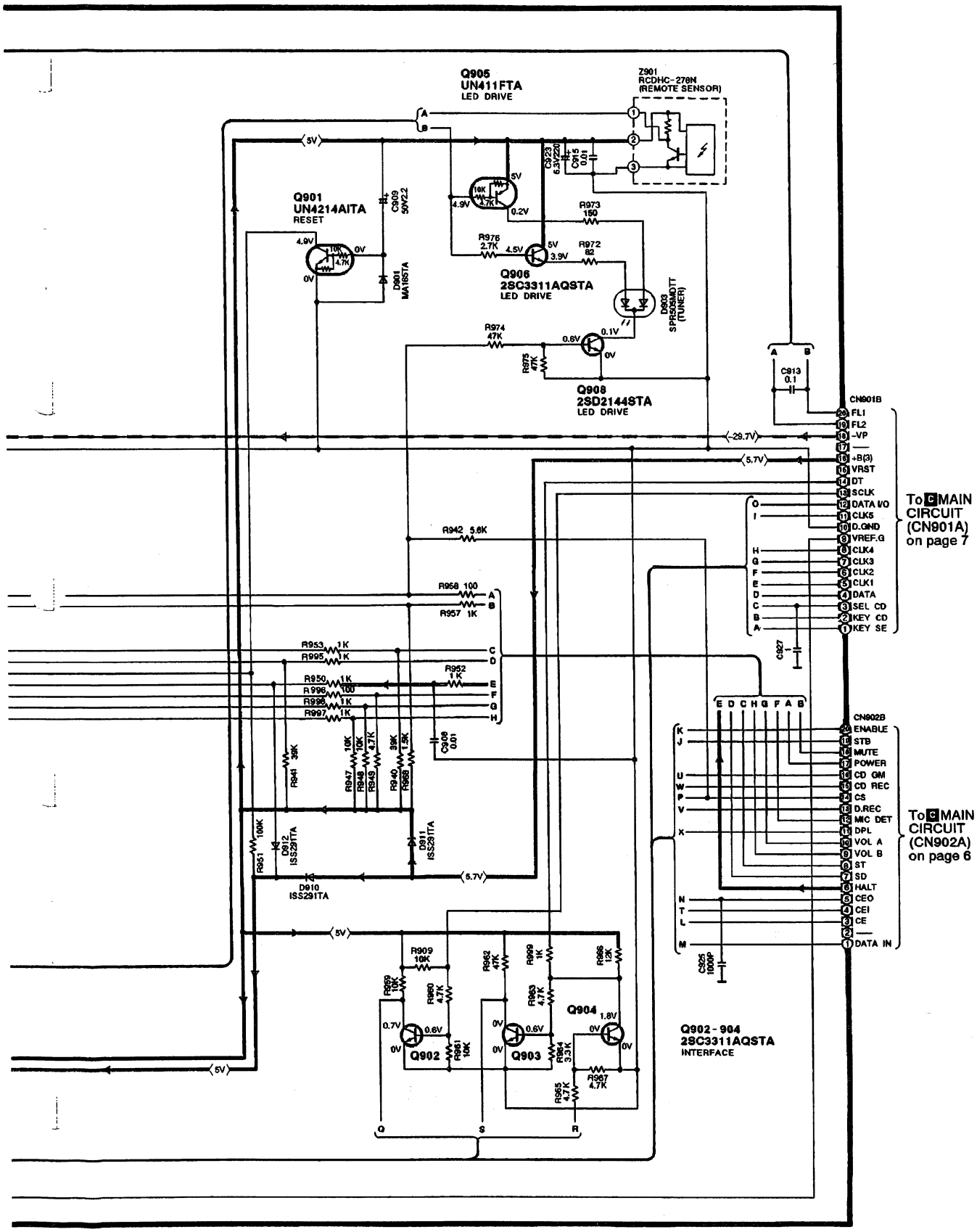
: Positive voltage line : FM signal line : FM OSC signal line
: AM (LW/MW) signal line : AM (LW/MW) OSC signal line



B OPERATION CIRCUIT (P.C.Board : on page 16)

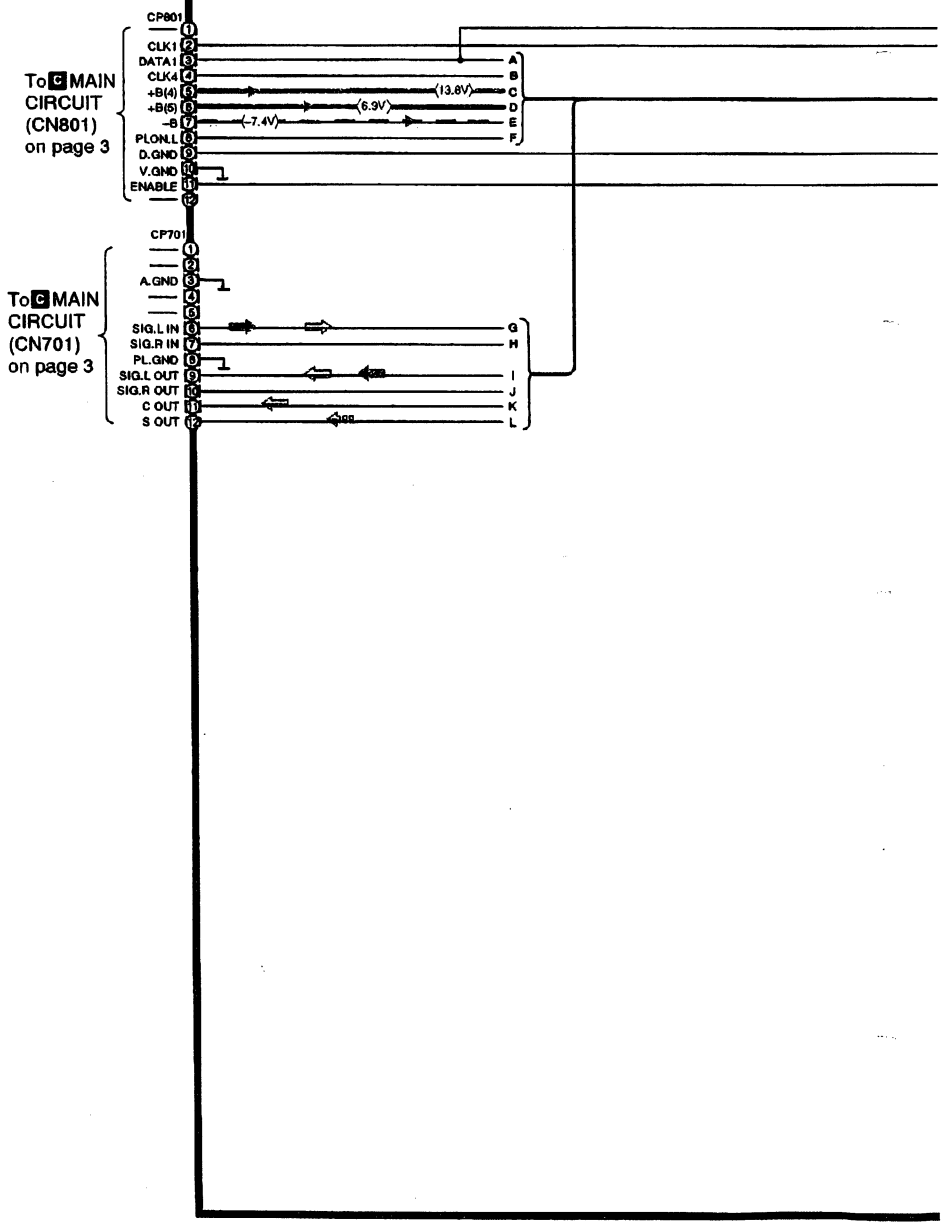


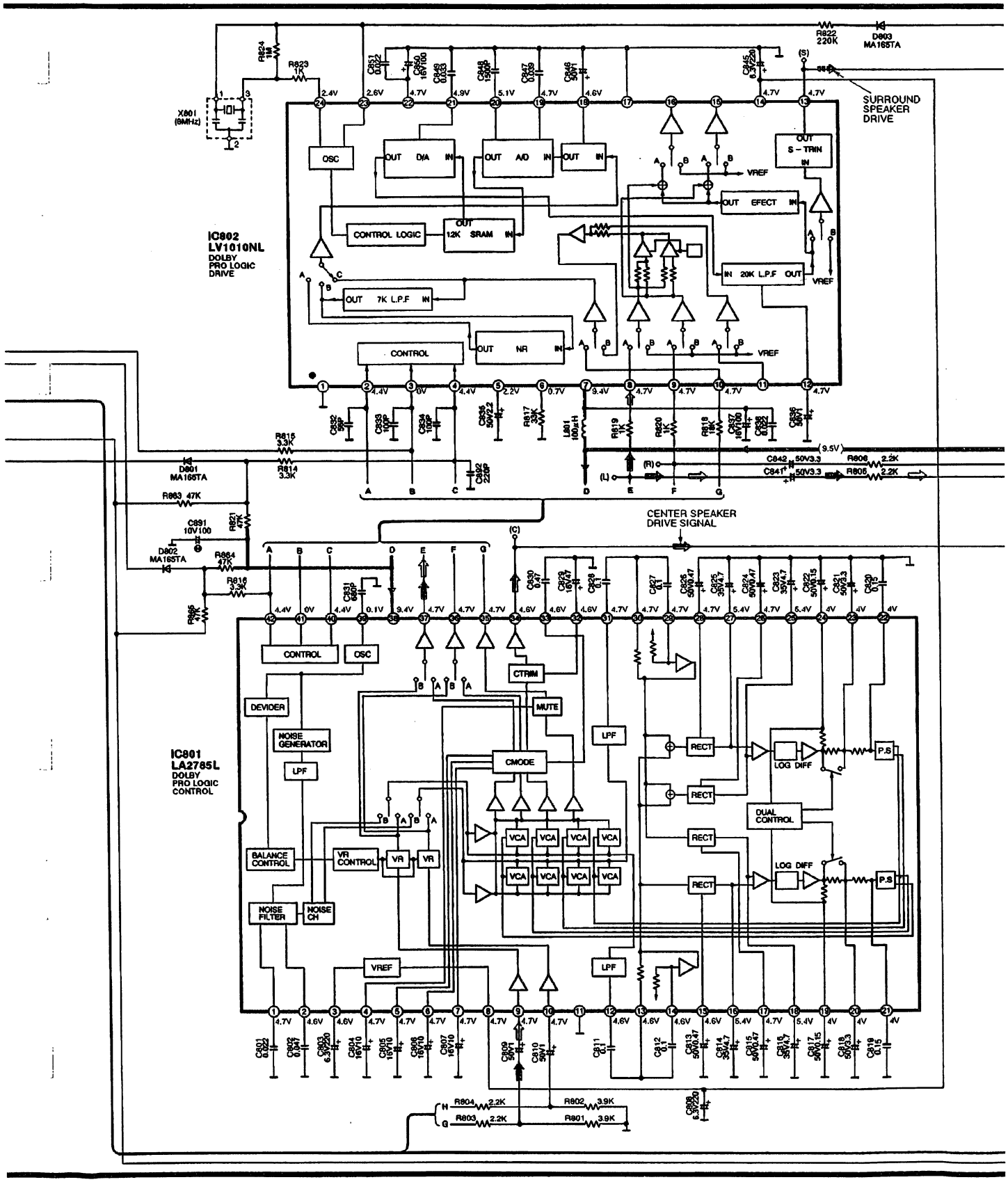
: Positive voltage line : Negative voltage line



: Positive voltage line
: Negative voltage line
: FM signal line
: AM (LW/MW) signal line
: REC OUT signal line
: MIC signal line
: Center speaker drive signal line
: Surround speaker drive signal line

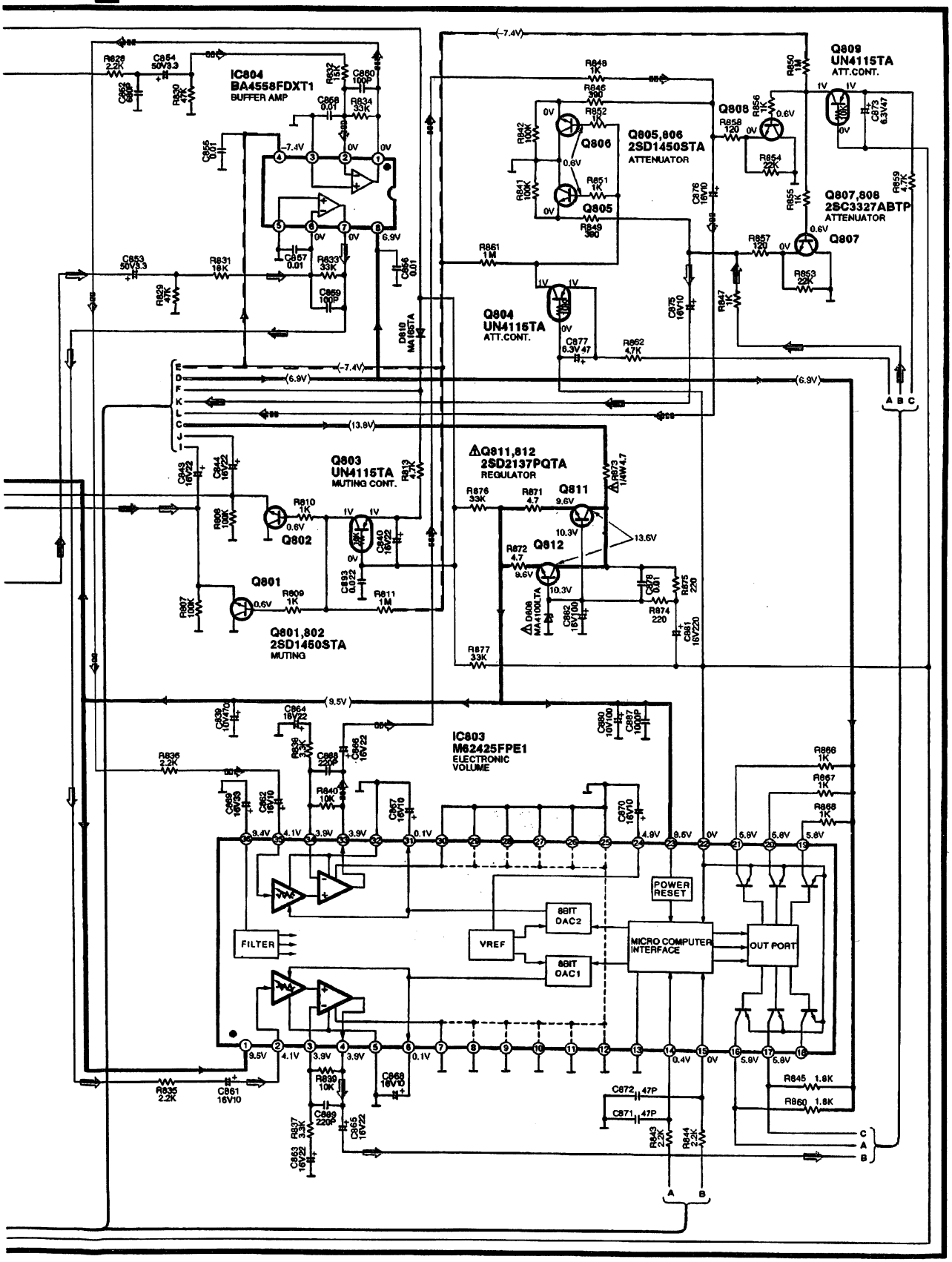
D DOLBY PRO LOGIC CIRCUIT (P.C.Board:on page 17)




IC802
LV1010NL
DOLBY
PRO LOGIC
DRIVE
IC801
LA2765L
DOLBY
PRO LOGIC
CONTROL
SURROUND
SPEAKER
DRIVE
CENTER SPEAKER
DRIVE SIGNAL
X801
(8MHz)
OSC
CONTROL LOGIC
CONTROL
DEVIDER
NOISE
GENERATOR
LPF
CMODE
MUTE
CTRIM
VCA
RECT
LOG DIFF
DUAL
CONTROL
BALANCE
CONTROL
VR
CONTROL
NOISE
FILTER
NOISE
CH
VREF
D801
MA165TA
D802
MA165TA
D803
MA165TA

: Positive voltage line : Negative voltage line : FM signal line
: AM (LW/MW) signal line : REC OUT signal line : MIC signal line
: Center speaker drive signal line : Surround speaker drive signal line

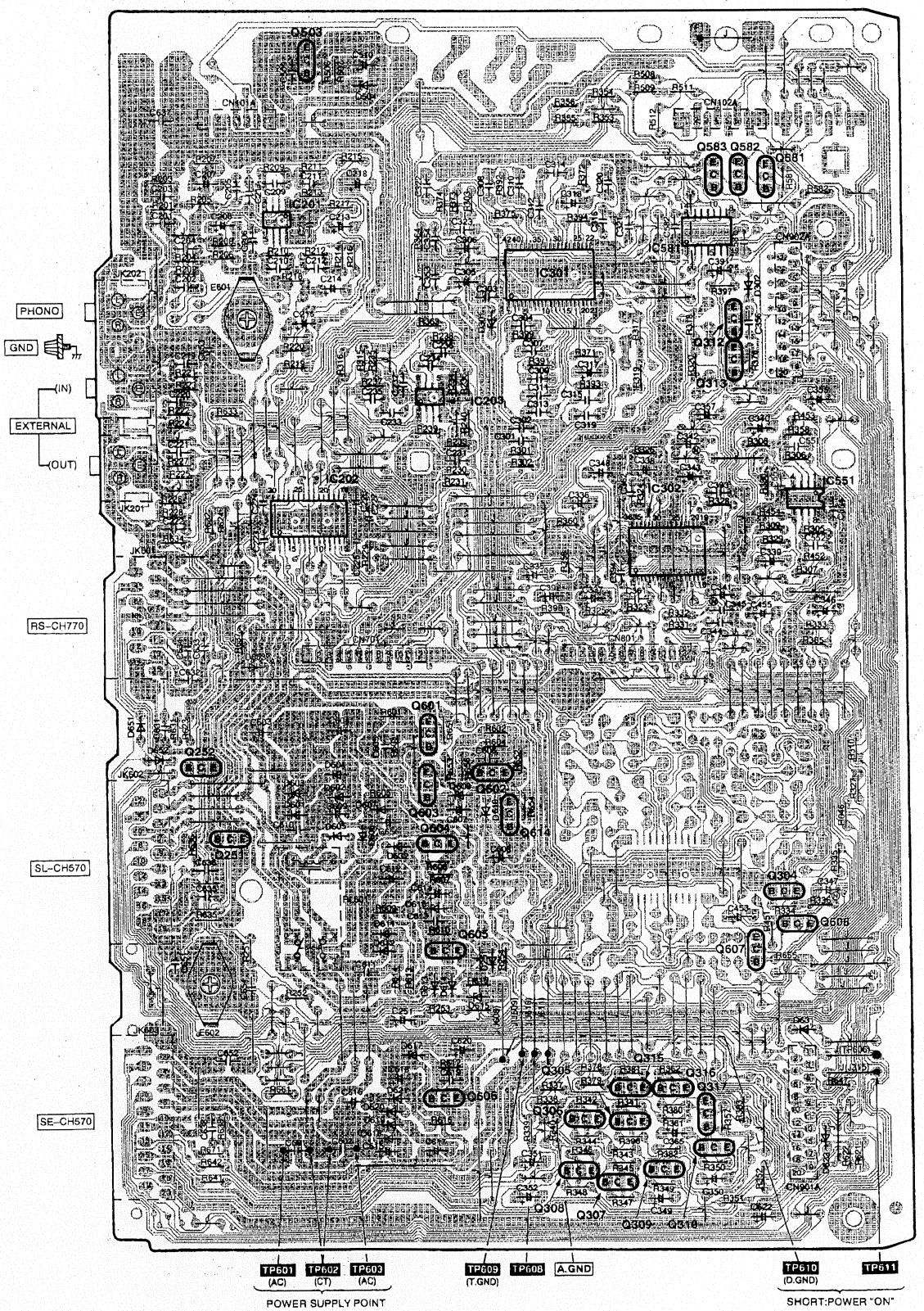
D DOLBY PRO LOGIC CIRCUIT (P.C.Board:on page 17)



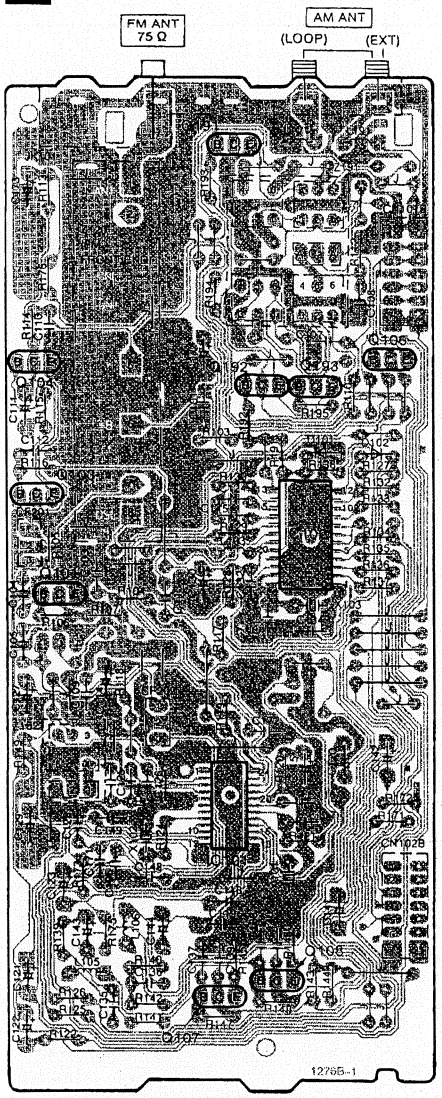
■ Printed Circuit Board Diagram

- This circuit board diagram may be modified at any time with the development of new technology.

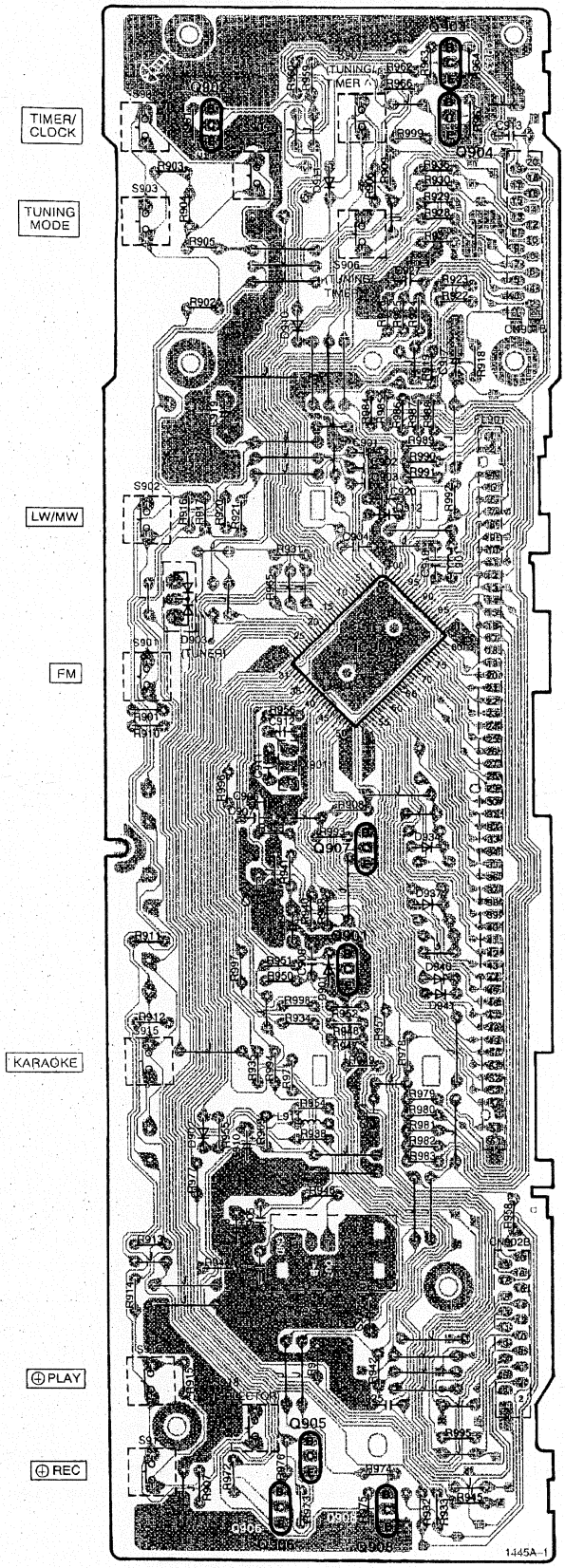
C **MAIN P.C.B. (REP2120J–M)**



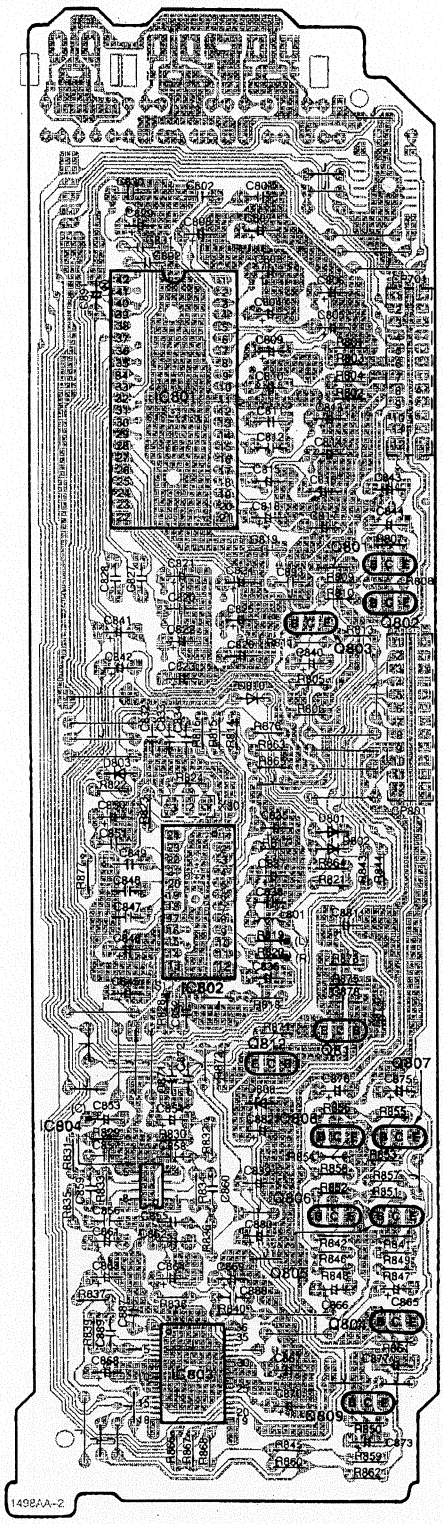
A TUNER P.C.B. (REP1930G–T)



B OPERATION P.C.B. (REP2365H–S)



D DOLBY PRO LOGIC P.C.B. (REP2172B–T)



■ Replacement Parts List

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)	
IC101	LA1832MH-TEL	IC, FM/AM(LW/MW) IF AMP.	
IC102	LC7218M-TE-L	IC, PLL FREQ. SYNTHESIZER	
IC201	AN6558SFE2	IC, PHONO EQ AMP.	
IC202	NJU7313AMT2	IC, INPUT SELECTOR	
IC203	M5219FPTA	IC, BUFFER AMP.	
IC301	M62422FPE1	IC, DIGITAL SOUND CONT.	
IC302	M62425FPE1	IC, ELECTRONIC VOLUME	
IC551	BA4558FDXT1	IC, MIC AMP.	
IC581	MC14066BFEL	IC, SWITCHING	
IC801	LA2785L	IC, DOLBY PRO LOGIC CONTROL	
IC802	LV1010NL	IC, DOLBY PRO LOGIC DRIVE	
IC803	M62425FPE1	IC, ELECTRONIC VOLUME	
IC804	BA4558FDXT1	IC, BUFFER AMP.	
IC901	M38197MA132F	IC, SYSTEM CONTROL/FL DRIVE	
		TRANSISTOR(S)	
Q101	2SC2787L	TRANSISTOR	
Q103, 104	2SC2785FE	TRANSISTOR	
Q106	UN411FTA	TRANSISTOR	
Q107, 108	2SC3311ARSTA	TRANSISTOR	
Q191-193	2SC3311ARSTA	TRANSISTOR	
Q251, 252	2SD2144S	TRANSISTOR	
Q304	2SD2144S	TRANSISTOR	
Q305, 306	2SC3311A-Q	TRANSISTOR	
Q307, 308	2SD2144S	TRANSISTOR	
Q309, 310	UN4115	TRANSISTOR	
Q312, 313	2SA1309A-R	TRANSISTOR	
Q315, 316	2SC3311A-Q	TRANSISTOR	
Q317	UN4115	TRANSISTOR	
Q503	2SC3940AQSTA	TRANSISTOR	⚠
Q581	UN4211	TRANSISTOR	
Q582	UN4111	TRANSISTOR	
Q583	UN4211	TRANSISTOR	
Q601	2SD2137PQTA	TRANSISTOR	⚠
Q602	2SB1417PQTA	TRANSISTOR	⚠
Q603	2SD2137PQTA	TRANSISTOR	⚠
Q604	2SD2144S	TRANSISTOR	
Q605	2SD2137PQTA	TRANSISTOR	⚠
Q606	2SB621A-R	TRANSISTOR	⚠
Q607	UN4213AITA	TRANSISTOR	
Q608	UN4111	TRANSISTOR	
Q614	2SB1417PQTA	TRANSISTOR	⚠
Q801, 802	2SD1450RTA	TRANSISTOR	
Q803, 804	UN4115	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q805, 806	2SD1450RTA	TRANSISTOR	
Q807, 808	2SC3327-A	TRANSISTOR	
Q809	UN4115	TRANSISTOR	
Q811, 812	2SD2137PQTA	TRANSISTOR	⚠
Q901	UN4214TA	TRANSISTOR	
Q902-904	2SC3311A-Q	TRANSISTOR	
Q905	UN411FTA	TRANSISTOR	
Q906	2SC3311A-Q	TRANSISTOR	
Q907	UN4119	TRANSISTOR	
Q908	2SD2144S	TRANSISTOR	
		DIODE (S)	
D101	MA4051MTA	DIODE	⚠
D102	MA165	DIODE	
D251	MA29WA	DIODE	
D301	MA4051-L	DIODE	⚠
D302	MA165	DIODE	
D504	MA4082MTA	DIODE	⚠
D601-604	RL1N4003N02	DIODE	⚠
D605	MA165	DIODE	
D606, 607	MA719TA	DIODE	
D609	MA4075HTA	DIODE	⚠
D610	MA4082LTA	DIODE	⚠
D611, 612	RL1N4003N02	DIODE	⚠
D613, 614	MA185TA	DIODE	⚠
D615	MA4051MTA	DIODE	⚠
D616	MA4062-H	DIODE	⚠
D617	MA4300M	DIODE	⚠
D618-621	MA185TA	DIODE	⚠
D622	MA4039MTA	DIODE	⚠
D631	MA700TA	DIODE	
D632	MA165	DIODE	
D651, 652	MA165	DIODE	
D653	MA719TA	DIODE	
D801-803	MA165	DIODE	
D808	MA4100LTA	DIODE	⚠
D810	MA165	DIODE	
D901, 902	MA165	DIODE	
D903	SPR505MDTT	L. E. D.	
D910-912	1SS291TA	DIODE	
D934	MA165	DIODE	
D937	MA165	DIODE	
D940	MA165	DIODE	
D941	MA165	DIODE	
		COMPONENT COMBINATION (S)	

Ref. No.	Part No.	Part Name & Description	Remarks
Z102	RLI2ZD06M-T	COMPONENT COMBINATION	
Z120	RALD033	FM FRONT END	
Z191	RLA6ZD05M-T	COMPONENT COMBINATION	
Z901	RCDHC-278N	REMOTE SENSOR	
		COIL(S)	
L101	ELESNR68MA	COIL	
L103	ELEXTR47MA9	COIL	
L105, 106	ELELN822KL	COIL	
L191	ELESNR68MA	COIL	
L801	ELESN101KA	COIL	
L901	RLQA100JT-Y	COIL	
L911	ELEXT3R3KA9	COIL	
		FILTER(S)	
CF201	RLFFETWND01M	CERAMIC FILTER	
CF202	RLFFETWND01M	CERAMIC FILTER	
		OSCILLATOR(S)	
X101	RSXZ456KM07M	OSCILLATOR(456 kHz)	
X102	RLFDGT05DD	OSCILLATOR(10.65 MHz)	
X103	RSXC7M20S05T	OSCILLATOR(7.2 MHz)	
X801	EF0EC8004T4	OSCILLATOR(8 MHz)	
X901	RSXC4M19S02T	OSCILLATOR(4.19 MHz)	
		DISPLAY TUBE	
FL901	RSLD223-F	DISPLAY TUBE	
		SWITCH(ES)	
S901	EVQ21405R	SW, FM	
S902	EVQ21405R	SW, LW/MW(AM)	
S903	EVQ21405R	SW, TUNING MODE	
S904	EVQ21405R	SW, TIMER/CLOCK	
S905	EVQ21405R	SW, SET	
S906	EVQ21405R	SW, TUNING/TIMER DOWN	
S907	EVQ21405R	SW, TUNING/TIMER UP	
S915	EVQ21405R	SW, KARAOKE	
S916	EVQ21405R	SW, PLAY TIMER	
S917	EVQ21405R	SW, RECORD TIMER	
S918	EVQ21405R	SW, SELECTOR	
		CONNECTOR(S)	
CN101A	RJT057W007-1	CONNECTOR(7P)	
CN101B	RJU057W007	CONNECTOR(7P)	
CN102A	RJT057W007-1	CONNECTOR(7P)	
CN102B	RJU057W007	CONNECTOR(7P)	
CN701	RJT057W012-1	CONNECTOR(12P)	
CN801	RJT057W012-1	CONNECTOR(12P)	
CN901A	RJS1A6820	CONNECTOR(20P)	
CN901B	RJS1A6820	CONNECTOR(20P)	
CN902A	RJS1A6820	CONNECTOR(20P)	
CN902B	RJS1A6820	CONNECTOR(20P)	

Ref. No.	Part No.	Part Name & Description	Remarks
CP701	RJU057W012	CONNECTOR(12P)	
CP801	RJU057W012	CONNECTOR(12P)	
		GND PLATE	
E601, 602	SNE1004-2	GND PLATE	
		RELAY	
RL601	RSY0017M-0	RELAY	⚠
		JACK(S)	
JK101	RJH5210M	EXT ANT	
JK201	SJF3068-7N	EXT OUT	
JK202	SJF3069-5N	EXT IN/PHONO(AUX)	
JK601	RJT065K15	SYSTEM CONNECTOR(15P)	
JK602	RJT065K19	SYSTEM CONNECTOR(19P)	
JK603	RJT065K20	SYSTEM CONNECTOR(20P)	

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R103	ERDS2TJ181T	1/4W 180
R104	ERDS2TJ102	1/4W 1K
R105	ERDS2TJ471	1/4W 470
R106	ERDS2TJ474	1/4W 470K
R107	ERDS2TJ331	1/4W 330
R110	ERDS2TJ102	1/4W 1K
R112	ERDS2TJ104	1/4W 100K
R113	ERDS2TJ103	1/4W 10K
R114	ERDS2TJ562	1/4W 5.6K
R115	ERDS2TJ561	1/4W 560
R116	ERDS2TJ102	1/4W 1K
R117	ERDS2TJ393	1/4W 39K
R118	ERDS2TJ562	1/4W 5.6K
R119	ERDS2TJ822	1/4W 8.2K
R120	ERDS2TJ473	1/4W 47K
R121	ERDS2TJ332	1/4W 3.3K
R122	ERDS2TJ272T	1/4W 2.7K
R124	ERDS2TJ271	1/4W 270
R125, 126	ERDS2TJ152	1/4W 1.5K
R127	ERDS2TJ103	1/4W 10K
R128	ERDS2TJ820	1/4W 82
R129	ERDS2TJ473	1/4W 47K
R130	ERDS2TJ103	1/4W 10K
R132	ERDS2TJ103	1/4W 10K
R133-137	ERDS2TJ102	1/4W 1K
R138	ERDS2TJ103	1/4W 10K
R139, 140	ERDS2TJ272T	1/4W 2.7K
R141, 142	ERDS2TJ102	1/4W 1K
R143, 144	ERDS2TJ222	1/4W 2.2K
R145, 146	ERDS2TJ102	1/4W 1K
R147, 148	ERDS2TJ474	1/4W 470K
R149	ERDS2TJ680T	1/4W 68
R171, 172	ERDS2TJ102	1/4W 1K
R173	ERDS2TJ471	1/4W 470
R175	ERDS2TJ102	1/4W 1K
R176	ERDS2TJ391	1/4W 390
R191	ERDS2TJ103	1/4W 10K
R192	ERDS2TJ122	1/4W 1.2K
R193	ERDS2TJ182	1/4W 1.8K
R194	ERDS2TJ122	1/4W 1.2K
R195	ERDS2TJ222	1/4W 2.2K
R201, 202	ERDS2TJ102	1/4W 1K
R203, 204	ERDS2TJ473	1/4W 47K
R205, 206	ERDS2TJ331	1/4W 330
R207, 208	ERDS2TJ271	1/4W 270
R209, 210	ERDS2TJ184T	1/4W 180K
R211, 212	ERDS2TJ123	1/4W 12K
R213, 214	ERDS2TJ680T	1/4W 68
R215, 216	ERDS2TJ272T	1/4W 2.7K
R217, 218	ERDS2TJ392T	1/4W 3.9K
R219, 220⚠	ERDS1FVJ221T	1/2W 220
R221, 222	ERDS2TJ752T	1/4W 7.5K
R223, 224	ERDS2TJ562	1/4W 5.6K
R225, 226	ERDS2TJ472	1/4W 4.7K
R227, 228	ERDS2TJ332	1/4W 3.3K
R229-231	ERDS2TJ222	1/4W 2.2K
R233, 234	ERDS2TJ223	1/4W 22K
R235, 236	ERDS2TJ822	1/4W 8.2K
R237, 238	ERDS2TJ123	1/4W 12K
R239, 240	ERDS2TJ102	1/4W 1K
R251, 252	ERDS2TJ222	1/4W 2.2K
R253	ERDS2TJ223	1/4W 22K
R254	ERDS2TJ222	1/4W 2.2K
R301, 302	ERDS2TJ222	1/4W 2.2K
R303	ERDS2TJ102	1/4W 1K
R305, 306	ERDS2TJ223	1/4W 22K
R307	ERDS2TJ822	1/4W 8.2K
R308, 309	ERDS2TJ153	1/4W 15K
R310	ERDS2TJ182	1/4W 1.8K
R315, 316	ERDS2TJ102	1/4W 1K
R317, 318	ERDS2TJ471	1/4W 470
R319, 320	ERDS2TJ103	1/4W 10K
R323, 324	ERDS2TJ103	1/4W 10K
R325, 326	ERDS2TJ682T	1/4W 6.8K
R327, 328	ERDS2TJ182	1/4W 1.8K
R329, 330	ERDS2TJ102	1/4W 1K
R331, 332	ERDS2TJ222	1/4W 2.2K
R333	ERDS2TJ104	1/4W 100K
R334	ERDS2TJ102	1/4W 1K
R335	ERDS2TJ104	1/4W 100K
R336	ERDS2TJ223	1/4W 22K
R337, 338	ERDS2TJ391	1/4W 390
R339, 340	ERDS2TJ122	1/4W 1.2K
R341, 342	ERDS2TJ104	1/4W 100K
R343	ERDS2TJ105T	1/4W 1M
R344	ERDS2TJ102	1/4W 1K
R345, 346	ERDS2TJ104	1/4W 100K
R347, 348	ERDS2TJ102	1/4W 1K
R349	ERDS2TJ104	1/4W 100K
R350	ERDS2TJ105T	1/4W 1M
R351	ERDS2TJ222	1/4W 2.2K
R352	ERDS2TJ182	1/4W 1.8K
R353, 354	ERDS2TJ102	1/4W 1K
R355, 356	ERDS2TJ104	1/4W 100K
R357	ERDS2TJ105T	1/4W 1M
R358	ERDS2TJ822	1/4W 8.2K
R359, 360	ERDS2TJ473	1/4W 47K
R361	ERDS2TJ102	1/4W 1K
R362	ERDS2TJ223	1/4W 22K
R363, 364	ERDS2TJ473	1/4W 47K
R365	ERDS2TJ102	1/4W 1K
R371, 372	ERDS2TJ100	1/4W 10
R373, 374	ERDS2TJ224T	1/4W 220K
R375	ERDS2TJ103	1/4W 10K
R376	ERDS2TJ223	1/4W 22K
R378, 379	ERDS2EJ121	1/4W 120
R380	ERDS2TJ102	1/4W 1K
R381	ERDS2TJ223	1/4W 22K
R382	ERDS2TJ105T	1/4W 1M
R383	ERDS2TJ472	1/4W 4.7K
R391, 392	ERDS2TJ222	1/4W 2.2K
R393, 394	ERDS2TJ100	1/4W 10
R396	ERDS2TJ102	1/4W 1K
R397	ERDS2TJ150T	1/4W 15
R398	ERDS2TJ1R0	1/4W 1.0
R399	ERDS2TJ105T	1/4W 1M
R451	ERDS2TJ102	1/4W 1K
R452	ERDS2TJ682T	1/4W 6.8K
R453	ERDS2TJ123	1/4W 12K
R454	ERDS2TJ223	1/4W 22K
R506	ERDS2TJ152	1/4W 1.5K
R507	ERDS2TJ331	1/4W 330
R508, 509	ERDS2TJ473	1/4W 47K
R511, 512	ERDS2TJ103	1/4W 10K
R581	ERDS2TJ104	1/4W 100K
R582	ERDS2TJ102	1/4W 1K
R601, 602⚠	ERD2FCVJ4R7T	1/4W 4.7
R603, 604	ERDS2TJ102	1/4W 1K
R605	ERDS2TJ101	1/4W 100
R606, 607	ERDS2TJ393	1/4W 39K
R609⚠	ERD2FCVJ4R7T	1/4W 4.7
R610	ERDS2TJ102	1/4W 1K
R612	ERDS2TJ472	1/4W 4.7K
R613, 614	ERDS2TJ682T	1/4W 6.8K
R615	ERDS2TJ103	1/4W 10K
R616⚠	ERD25FVJ4R7T	1/4W 4.7
R621, 622	ERDS2TJ151	1/4W 150
R623, 624	ERDS2TJ682T	1/4W 6.8K
R631-634	ERDS2TJ102	1/4W 1K
R635, 636	ERDS2TJ222	1/4W 2.2K
R637	ERDS2TJ100	1/4W 10
R638	ERDS2TJ103	1/4W 10K
R641, 642	ERDS2TJ471	1/4W 470
R646	ERDS2TJ562	1/4W 5.6K
R647	ERDS2TJ123	1/4W 12K

Ref. No.	Part No.	Values & Remarks
R651-654	ERDS2TJ2R2T	1/4W 2.2
R655	ERDS2TJ102	1/4W 1K
R656	ERDS2TJ221	1/4W 220
R661	ERDS2TJ101	1/4W 100
R671	ERDS2TJ102	1/4W 1K
R801, 802	ERDS2TJ392T	1/4W 3.9K
R803-806	ERDS2TJ222	1/4W 2.2K
R807, 808	ERDS2TJ104	1/4W 100K
R809, 810	ERDS2TJ102	1/4W 1K
R811	ERDS2TJ105T	1/4W 1M
R813	ERDS2TJ472	1/4W 4.7K
R814-816	ERDS2TJ332	1/4W 3.3K
R817	ERDS2TJ333	1/4W 33K
R818	ERDS2TJ183T	1/4W 18K
R819, 820	ERDS2TJ102	1/4W 1K
R821	ERDS2TJ473	1/4W 47K
R822	ERDS2TJ274	1/4W 270K
R823	ERDS2TJ102	1/4W 1K
R824	ERDS2TJ105T	1/4W 1M
R828	ERDS2TJ222	1/4W 2.2K
R829, 830	ERDS2TJ473	1/4W 47K
R831	ERDS2TJ183T	1/4W 18K
R832	ERDS2TJ153	1/4W 15K
R833, 834	ERDS2TJ333	1/4W 33K
R835, 836	ERDS2TJ222	1/4W 2.2K
R837, 838	ERDS2TJ332	1/4W 3.3K
R839, 840	ERDS2TJ103	1/4W 10K
R841, 842	ERDS2TJ104	1/4W 100K
R843, 844	ERDS2TJ222	1/4W 2.2K
R845	ERDS2TJ182	1/4W 1.8K
R846	ERDS2TJ391	1/4W 390
R847, 848	ERDS2TJ102	1/4W 1K
R849	ERDS2TJ391	1/4W 390
R850	ERDS2TJ105T	1/4W 1M
R851, 852	ERDS2TJ102	1/4W 1K
R853, 854	ERDS2TJ223	1/4W 22K
R855, 856	ERDS2TJ102	1/4W 1K
R857, 858	ERDS2EJ121	1/4W 120
R859	ERDS2TJ472	1/4W 4.7K
R860	ERDS2TJ182	1/4W 1.8K
R861	ERDS2TJ105T	1/4W 1M
R862	ERDS2TJ472	1/4W 4.7K
R863-865	ERDS2TJ473	1/4W 47K
R866-868	ERDS2TJ102	1/4W 1K
R871, 872	ERDS2TJ4R7T	1/4W 4.7
R873⚠	ERD2FCVJ4R7T	1/4W 4.7
R874, 875	ERDS2TJ221	1/4W 220
R876, 877	ERDS2TJ333	1/4W 33K
R901	ERDS2TJ821	1/4W 820
R902	ERDS2TJ102	1/4W 1K
R903	ERDS2TJ122	1/4W 1.2K
R904	ERDS2TJ152	1/4W 1.5K

Ref. No.	Part No.	Values & Remarks
R905	ERDS2TJ182	1/4W 1.8K
R906	ERDS2TJ222	1/4W 2.2K
R907	ERDS2TJ332	1/4W 3.3K
R908	ERDS2TJ223	1/4W 22K
R909	ERDS2TJ103	1/4W 10K
R910	ERDS2TJ821	1/4W 820
R911	ERDS2TJ102	1/4W 1K
R912	ERDS2TJ122	1/4W 1.2K
R913	ERDS2TJ152	1/4W 1.5K
R914	ERDS2TJ182	1/4W 1.8K
R915	ERDS2TJ222	1/4W 2.2K
R916-919	ERDS2TJ103	1/4W 10K
R920-922	ERDS2TJ102	1/4W 1K
R923	ERDS2TJ391	1/4W 390
R924	ERDS2TJ102	1/4W 1K
R925	ERDS2TJ221	1/4W 220
R926	ERDS2TJ101	1/4W 100
R927-933	ERDS2TJ102	1/4W 1K
R934	ERDS2TJ101	1/4W 100
R935	ERDS2TJ102	1/4W 1K
R936	ERDS2TJ101	1/4W 100
R938	ERDS2TJ102	1/4W 1K
R940, 941	ERDS2TJ393	1/4W 39K
R942	ERDS2TJ562	1/4W 5.6K
R943	ERDS2TJ223	1/4W 22K
R944	ERDS2TJ473	1/4W 47K
R945, 946	ERDS2TJ102	1/4W 1K
R947, 948	ERDS2TJ103	1/4W 10K
R949	ERDS2TJ472	1/4W 4.7K
R950	ERDS2TJ102	1/4W 1K
R951	ERDS2TJ104	1/4W 100K
R952, 953	ERDS2TJ102	1/4W 1K
R954	ERDS2TJ101	1/4W 100
R955	ERDS2TJ824	1/4W 820K
R956	ERDS2TJ101	1/4W 100
R957	ERDS2TJ102	1/4W 1K
R958	ERDS2TJ101	1/4W 100
R959	ERDS2TJ103	1/4W 10K
R960	ERDS2TJ472	1/4W 4.7K
R961	ERDS2TJ103	1/4W 10K
R962	ERDS2TJ473	1/4W 47K
R963	ERDS2TJ472	1/4W 4.7K
R964	ERDS2TJ332	1/4W 3.3K
R965	ERDS2TJ472	1/4W 4.7K
R966	ERDS2TJ123	1/4W 12K
R967	ERDS2TJ472	1/4W 4.7K
R968, 969	ERDS2TJ152	1/4W 1.5K
R971	ERDS2TJ104	1/4W 100K
R972	ERDS2TJ820	1/4W 82
R973	ERDS2TJ151	1/4W 150
R974, 975	ERDS2TJ473	1/4W 47K
R976	ERDS2TJ272T	1/4W 2.7K

Ref. No.	Part No.	Values & Remarks
R977	ERDS2TJ102	1/4W 1K
R978-992	ERDS2TJ104	1/4W 100K
R993-999	ERDS2TJ102	1/4W 1K
		CAPACITORS
C101	ECBT1C103NS5	16V 0.01U
C103	ECBT1C103NS5	16V 0.01U
C104	ECBT1H102KB5	50V 1000P
C105	ECBT1C103NS5	16V 0.01U
C106	ECBT1C103NS5	16V 0.01U
C107	ECBT1H473ZF5	50V 0.047U
C108	ECBT1H100JC5	50V 10P
C109, 110	ECBT1C103NS5	16V 0.01U
C111	ECEA1EKA4R7B	25V 4.7U
C112	ECBT1C103NS5	16V 0.01U
C113	ECBT1H102KB5	50V 1000P
C114	RCE1HKA3R3BG	50V 3.3U
C115	ECEA1EKA4R7B	25V 4.7U
C116	ECBT1C822KS5	16V 8200P
C117	ECQB1H102JF3	50V 1000P
C118, 119	ECFR1C103KR	16V 0.01U
C120, 121	ECEA1HKA010B	50V 1U
C122	ECEA1HKA2R2B	50V 2.2U
C123	ECEA1HKA010B	50V 1U
C124	ECBT1H102KB5	50V 1000P
C125	ECBT1H150JC5	50V 15P
C126	ECBT1H473ZF5	50V 0.047U
C127	ECEA1CKA220B	16V 22U
C128	ECBT1H102KB5	50V 1000P
C129, 130	ECEA0JKA101B	6.3V 100U
C132	ECBT1H102KB5	50V 1000P
C133, 134	ECBT1H270JU5	50V 27P
C135, 136	ECBT1C103KS5	16V 0.01U
C137, 138	ECBT1H561KB5	50V 560P
C139, 140	ECBT1C562KR5	16V 5600P
C141-144	ECEA1HKA010B	50V 1U
C145	ECBT1H220JC5	50V 22P
C148	ECBT1C103NS5	16V 0.01U
C149	ECBT1H104ZF5	50V 0.1U
C171, 172	ECBT1H102KB5	50V 1000P
C173	ECEA1CKA220B	16V 22U
C174	RCE1CKA100BG	16V 10U
C196	ECBT1H102KB5	50V 1000P
C201, 202	ECBT1H180J5	50V 18P
C203, 204	ECBT1H151KB5	50V 150P
C205, 206	ECBT1H102KB5	50V 1000P
C207, 208	RCE1AKA330BG	10V 33U
C209, 210	ECBT0J223MS5	6.3V 0.022U
C211, 212	ECBT1C682KR5	16V 6800P
C213, 214	RCE1CKA100BG	16V 10U
C215	ECBT1E1032F	25V 0.01U
C216	RCE1CM101BV	16V 100U

Ref. No.	Part No.	Values & Remarks
C217	ECBT1E103ZF	25V 0.01U
C218	RCE1AKA101BG	10V 100U
C219-222	ECBT1H101KB5	50V 100P
C223, 224	ECBT1H104ZF5	50V 0.1U
C225-227	ECBT1H470J5	50V 47P
C231, 232	ECBT1E103ZF	25V 0.01U
C233, 234	ECBT1H102KB5	50V 1000P
C235, 236	ECBT1H101KB5	50V 100P
C251	RCE1CKA470BG	16V 47U
C301, 302	ECBT1H470J5	50V 47P
C303	ECBT1E103ZF	25V 0.01U
C304	ECFR1C473KR	16V 0.047U
C305, 306	RCE1CKA100BG	16V 10U
C307-310	ECFR1C104KR	16V 0.1U
C311, 312	ECFR1C123KR	16V 0.012U
C313, 314	ECFR1C153KR	16V 0.015U
C315, 316	ECBT1C332KR5	16V 3300P
C317, 318	ECEA1HKAR15B	50V 0.15U
C319, 320	ECFR1C104KR	16V 0.1U
C321	ECBT1E103ZF	25V 0.01U
C322	ECFR1C473KR	16V 0.047U
C323	ECFR1C103KR	16V 0.01U
C335, 336	RCE1CKA100BG	16V 10U
C337-340	ECEA1CKA220B	16V 22U
C341, 342	ECEA1AKN100B	10V 10U
C343	RCE1CKA100BG	16V 10U
C344, 345	ECBT1H470J5	50V 47P
C346	ECEA1HKA0R1B	50V 0.1U
C347	ECEA1CN100SB	16V 10U
C348	ECEA1CKA330B	16V 33U
C349	RCE1HKA3R3BG	50V 3.3U
C350	ECEA0JKA470B	6.3V 47U
C351, 352	RCE1CKA100BG	16V 10U
C353, 354	ECBT1H101KB5	50V 100P
C355	ECEA1CKA330B	16V 33U
C356	ECBT1H104ZF5	50V 0.1U
C357	RCE1CM101BV	16V 100U
C361, 362	ECBT1H221KB5	50V 220P
C365	ECEA0JKA470B	6.3V 47U
C391, 392	RCE1CM101BV	16V 100U
C393, 394	ECBT1H102KB5	50V 1000P
C453	ECEA1HKA010B	50V 1U
C455	RCE1CKA100BG	16V 10U
C509	ECBT1E103ZF	25V 0.01U
C510	RCE1AKA101BG	10V 100U
C551	ECBT1H331KB5	50V 330P
C552	ECBT1H331KB5	50V 330P
C553	ECBT1E103ZF	25V 0.01U
C554	ECBT1E103ZF	25V 0.01U
C581, 582	ECBT1H104ZF5	50V 0.1U
C601, 602	ECKT1H223ZF	50V 0.022U
C603 ⚠	ECA1EM222B	25V 2200U
C604 ⚠	RCE1EM471BV	25V 470U
C605, 606	ECBT1E103ZF	25V 0.01U
C607	RCE1CKA100BG	16V 10U
C608	RCE1CM101BV	16V 100U
C609	ECBT1H102KB5	50V 1000P
C610, 611	ECBT1H104ZF5	50V 0.1U
C612	RCE1EM471BV	25V 470U
C613	ECBT1E103ZF	25V 0.01U
C614	RCE1CKA100BG	16V 10U
C615	ECEA1EKA101B	25V 100U
C616	ECA1HM470B	50V 47U
C617⚠	ECA1HM470B	50V 47U
C618	ECA1JM470B	63V 47U
C619	ECBT1E103ZF	25V 0.01U
C620	RCE1VKA100BG	35V 10U
C622	RCE1VKA100BG	35V 10U
C631-636	ECBT1H101KB5	50V 100P
C637	ECBT1H102KB5	50V 1000P
C638	ECBT1H101KB5	50V 100P
C651, 652	ECBT1H104ZF5	50V 0.1U
C653	ECBT1H102KB5	50V 1000P
C654	ECBT1H104ZF5	50V 0.1U
C655	RCE1CM101BV	16V 100U
C801	ECFR1C223KR	16V 0.022U
C802	ECFR1E473KR	25V 0.047U
C803	ECEA0JKA221B	6.3V 220U
C804-807	RCE1CKA100BG	16V 10U
C808	ECEA0JKA221B	6.3V 220U
C809, 810	ECEA1HKA010B	50V 1U
C811, 812	ECQV1H104JM3	50V 0.1U
C813	RCE1HKAR47BG	50V 0.47U
C814	ECEA1VKA4R7B	35V 4.7U
C815	RCE1HKAR47BG	50V 0.47U
C816	ECEA1VKA4R7B	35V 4.7U
C817	ECEA1HKAR15B	50V 0.15U
C818	RCE1HKA3R3BG	50V 3.3U
C819, 820	ECQV1H154JM3	50V 0.15U
C821	RCE1HKA3R3BG	50V 3.3U
C822	ECEA1HKAR15B	50V 0.15U
C823	ECEA1VKA4R7B	35V 4.7U
C824	RCE1HKAR47BG	50V 0.47U
C825	ECEA1VKA4R7B	35V 4.7U
C826	RCE1HKAR47BG	50V 0.47U
C827, 828	ECQV1H104JM3	50V 0.1U
C829	RCE1CKA470BG	16V 47U
C830	ECQV1H474JM3	50V 0.47U
C831	ECBA1H681KB5	50V 680P
C832	ECBT1H560J5	50V 56P
C833, 834	ECBT1H101KB5	50V 100P
C835	ECEA1HKA2R2B	50V 2.2U
C836	ECEA1HKA010B	50V 1U
C837	ECEA1CKA101B	16V 100U
C838	ECBT1E223ZF	25V 0.022U
C839	ECA1AM471B	10V 470U
C840	ECEA1CKA220B	16V 22U
C841, 842	RCE1HKA3R3BG	50V 3.3U
C843, 844	ECEA1CKA220B	16V 22U
C845	ECEA0JKA221B	6.3V 220U
C846	ECEA1HKA010B	50V 1U
C847	ECQB1H393JF3	50V 0.039U
C848	ECFR1E152KR	25V 1500P
C849	ECQV1H333JM3	50V 0.033U
C850	ECEA1CKA101B	16V 100U
C851	ECBT1E223ZF	25V 0.022U
C852	ECBA1H681KB5	50V 680P
C853, 854	RCE1HKA3R3BG	50V 3.3U
C855-858	ECBT1E103ZF	25V 0.01U
C859, 860	ECBT1H101KB5	50V 100P
C861, 862	RCE1CKA100BG	16V 10U
C863-866	ECEA1CKA220B	16V 22U
C867, 868	RCE1CKA100BG	16V 10U
C869	ECEA1CKA330B	16V 33U
C870	RCE1CKA100BG	16V 10U
C871, 872	ECBT1H470J5	50V 47P
C873	ECEA0JKA470B	6.3V 47U
C875, 876	RCE1CKA100BG	16V 10U
C877	ECEA0JKA470B	6.3V 47U
C878	ECBT1E103ZF	25V 0.01U
C880	RCE1AKA101BG	10V 100U
C881	ECA1CM221B	16V 220U
C882	ECEA1CKA101B	16V 100U
C887	ECBT1H102KB5	50V 1000P
C888, 889	ECBT1H221KB5	50V 220P
C891	ECEA1AN101XB	10V 100U
C892	ECBT1H221KB5	50V 220P
C893	ECBT1E223ZF	25V 0.022U
C901-904	ECBT1H471KB5	50V 470P
C905, 906	ECBT1H102KB5	50V 1000P
C907	ECBT1H104ZF5	50V 0.1U
C908	ECBT1E103ZF	25V 0.01U
C909	ECEA1HKA2R2B	50V 2.2U
C910	RCE1CKA100BG	16V 10U
C911	ECBT1H270JU5	50V 27P
C912	ECBT1H220GC5	50V 22P
C913	ECBT1H104ZF5	50V 0.1U
C915	ECBT1E103ZF	25V 0.01U
C916, 917	ECEA1HKA010B	50V 1U
C918	ECBT1H104ZF5	50V 0.1U
C919	RCE0JU102BV	6.3V 1000U
C920	ECBT1E103ZF	25V 0.01U
C921	ECA0JKF101B	6.3V 100U
C923	ECEA0JKA221B	6.3V 220U
C924, 925	ECBT1H102KB5	50V 1000P
C927	ECBT1C105ZF5	16V 1U

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